



96-102

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Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, NW  
Washington, DC 20554

Federal Communications Commission  
Office of Secretary

**Re: Amendment of the Commission's Rules to  
Provide for Unlicensed NII/SUPERNet  
Operations in the 5 Ghz Frequency Range**

Dear Mr. Caton:

Transmitted herewith are an original and nine copies of Comments of Rockwell International Corporation in the above-identified FCC Docket Number ET-96-102.

Please address any questions to the undersigned.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Linda C. Sadler'.

Linda C. Sadler  
Manager, Regulatory Affairs  
(703) 412-6696

cc: Quent Cassen, Rockwell International

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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Federal Communications Commission  
Office of Secretariat

In the Matter of the Application of )  
)  
Amendment of the Commission's Rules to ) ET Docket Number 96-102  
Provide for Unlicensed NII/SUPERNet )  
Operations in the 5 GHz Frequency Range )

**Comments of Rockwell International Corporation**

Pursuant to Section 1.415 of the Federal Communications Commission ("the Commission") Rules and Regulations, Rockwell International Corporation ("Rockwell") hereby submits an original and nine copies of Comments on the Notice of Proposed Rulemaking ("Notice") regarding proposed modifications to the Commission's Rules to provide for unlicensed operations of NII/SUPERNet devices in the 5 GHz band.

**INTRODUCTION**

Rockwell is a diversified high technology company that manufactures a wide variety of radio frequency equipment for the aeronautical, maritime, land mobile and satellite services as well as systems and devices authorized under Part 15 of the Commission's Rules and Regulations. Rockwell is also a major manufacturer of wireline telecommunications chipsets for fax engines and computer modems. Rockwell supports the Commission's proposals to make available spectrum for unlicensed operation of broadband NII/SUPERNet devices that will facilitate broadband wireless access to the National Information Infrastructure. Rockwell also supports the Commission's proposal to subject these devices to the minimum technical standards necessary to prevent harmful interference between the devices and to other services operating in and around the 5 GHz band.

## DISCUSSION

- a. **Wide deployment of broadband wireless technology is necessary to fully realize the benefits of today's multimedia and high speed information applications and make them available to a greater proportion of society.**

Multimedia and high speed information technologies are proliferating rapidly throughout our society. Businesses, educational and health care institutions and other users are taking advantage of the many broadband communications techniques available today using the existing wireline infrastructure. In order to realize the full potential of today's broadband information technologies and encourage further innovation in delivery, spectrum must be made available immediately to link mobile users and those who currently are not served by the broadband wireline infrastructure. If adopted, the Commission's proposal for 350 MHz for NII/SUPERNet operations would provide the overall spectrum and channel bandwidths necessary to inexpensively and flexibly deliver multimedia and high speed data to such users.

Existing wireless spectrum allocations are not capable of supporting the high bandwidth demands posed by today's advanced, multimedia and high speed data needs. Unlicensed wireless systems currently are limited to data rates of about 2 megabits/second, far short of the 20 megabits/second and higher data rates necessary to support many multimedia and high speed data applications. The proposed NII/SUPERNet operations would allow for wireless broadband transmission of audio, video, graphics and digital data in support of today's bandwidth-intensive applications. Demand for readily-available wireless broadband products continues to grow. Such growth in demand helps to drive the need for early deployment of the National Information Infrastructure that promises to achieve the public policy goals of bringing innovative information technologies to all segments of society.

**b. An unlicensed environment is essential to foster wide deployment of broadband wireless technologies.**

Today's unlicensed devices provide the benefits of radio communications directly to millions of consumers and business users everywhere in the United States. Unlicensed devices are designed and deployed to provide communications used every day by consumers, such as cordless telephony, or by business, such as remote utility meter reading. There are hundreds of innovative and customized uses of unlicensed radio equipment and all of them are available without the delays of licensing or the technological restrictions and expenses of carrier-provided services. In addition, unlicensed devices efficiently share and reuse spectrum without causing harmful interference. Finally, they are manufactured by a competitive but highly diversified group of manufacturers. These are the ingredients of a highly competitive and dynamic marketplace that has expanded dramatically over the last several years and is poised to rapidly deploy broadband wireless technologies. The Commission should clear the way for the immediate and, by nature, competitive deployment of unlicensed broadband technologies in the 5 GHz band by implementing the NII/SUPERNet proposals and cast aside any notion of auctioning the spectrum.

**c. Technical requirements for NII/SUPERNet devices should be kept to the minimum level necessary to prevent harmful interference and promote spectral efficiency. The required spectrum sharing protocols should be developed through industry consensus.**

Unnecessary technical limitations will stifle the innovation that has fostered the availability and affordability of today's unlicensed communications devices. That is not to say that these devices should be permitted to proliferate without regard to their inference potential and spectral efficiency. Spectrum sharing protocols are necessary and, as the Commission has encouraged, should be developed through industry consensus, not government


rulemaking. Rockwell supports the Wireless Information Networks Forum ("WINForum") initiative to develop sharing rules through industry consensus.

### CONCLUSION

For the forgoing reasons, Rockwell urges the Commission to allocate the 350 MHz of spectrum specified in the Notice, enabling unlicensed NII/SUPERNet operations in the 5 GHz band.

Respectfully Submitted,

Rockwell International Corporation

By:   
Linda C. Sadler

Manager, Regulatory Affairs

Rockwell International

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